

CONFIDENTIAL

IC Reg.

Approved For Release 2004/10/28 : CIA-RDP80M01082A000200150011-6

IRAC-IR&DC-2/74
19 September 1974

MEMORANDUM FOR: Members of the Intelligence Research and
Development Council

SUBJECT: Some Concepts on the Improvement of the
"Presentation" Phase of the Intelligence
Process

25X1 1. At the 17 August 1974 Council session, [redacted]
attending for [redacted], mentioned some staff research he
had conducted for the DCI on the subject of new intelligence
presentation means. He stated that he would forward a copy
of his work to the Chairman.

25X1 2. Per [redacted] request and with the Chairman's
concurrence, copies of this document, as annotated by the DCI,
are forwarded to the members for information purposes.

[redacted]

Executive Secretary

Attachment as stated

25X1 [redacted]

Approved For Release 2004/10/28 : CIA-RDP80M01082A000200150011-6

FOR OFFICIAL USE ONLY

Approved For Release 2004/10/28 : CIA-RDP80M01082A000200150011-6

1 May 1974

MEMORANDUM FOR: Director of Central Intelligence

SUBJECT : New Intelligence Presentation Means

This describes the rationale by which I am approaching the subject.

Problem

To discover new approaches to the way in which information media techniques and technology and related ongoing R&D could be employed to extend user and analyst capacity for analyzing, perceiving and understanding intelligence.

Introduction

It has some utility to restate the problem so that through redundancy there is refinement. What I anticipate is that through understanding the relationship among

1) the process of organization of concepts, ideas and facts,

2) the analytical methods which give new insights to these, and

3) the applicability of media techniques and technology,

the Intelligence Community can lessen the impedance

- to the flow of intelligence between analyst and user, and

- to the understanding of the data processor's facts by the analyst.

Approved For Release 2004/10/28 : CIA-RDP80M01082A000200150011-6

FOR OFFICIAL USE ONLY

FOR OFFICIAL USE ONLY

Approved For Release 2004/10/28 : CIA-RDP80M01082A000200150011-6

These three interact in what I would call a "feasibility equation," which I will describe subsequently. I anticipate that what is being reported here will be a demonstration of the plausibility of the course which is recommended, i. e., the "strategic" view of how to go at solving the "problem." In practice, i. e., "tactically" the problem will be treated by meeting presentation needs in an iterative way on a one-by-one basis -- at least till more sophistication develops regarding "concept transfer" between intellects.

I anticipate also that there will be few, if any, truly unique, optimum solutions to presenting information but that there will be a spectrum of possibilities any one of which might be optimized to the needs of a particular intelligence user or analyst. What ought to develop then if we are successful is

1) some primitive approaches to giving really new insights to structurally non-trivial concepts and to complicated aggregation of facts, and

2) a management approach to satisfying user preferences for gaining those insights when the extant "bag of tricks" is inadequate.

The essence of developing new means of presentation of intelligence lies, I believe, in the skein that must be found between

- the finished intelligence producer's analytical construct or approach to finding the meaning of facts, and

- the media by which his conclusions can be transmitted to the user.

If the producers use conventional approaches, then conventional use of media will result. If, however, his approaches are conditioned

We must also think of varying media to the audience for various impact according to tastes

Excellent point -

FOR OFFICIAL USE ONLY

Approved For Release 2004/10/28 : CIA-RDP80M01082A000200150011-6

by the full capabilities of available media, then the analytical approach itself will foster the new presentation means. The skein between facts to be analyzed and intelligence to be presented is to be found -- I assert -- in the analytical methodologies which are employed. In fact, depending upon user or analyst preference many analytical methodologies might link a given set of facts and a given medium of presentation.

To avoid being unremittingly theoretical, there follows a listing of some

- relevant problems of analysis,
- analytical methodologies, and
- media technical capabilities.

Problems of Analysis

Problems of analysis means those kinds of tasks faced in certain offices of CIA, DDI and DDS&T; in DIA, DI and DE; and in State, INR. As other departments of government evolve their understanding of the role which intelligence can play in supporting national interest activities perhaps new tasks or new perspectives of old tasks will develop. Table 1 lists a number of problems, some specific in nature, other general.

All of the problems listed in Table 1 are familiar. All of them suggest or require a quantification of the facts involved. This is a necessity for analytical methodologies any one of which by its nature excludes intuition, i. e., a given set of facts must give rise to results which are invariant as to analyst. One can, of course, change results by changing analytical methods, hypotheses in analyses or in tolerating varying levels of confidence.

FOR OFFICIAL USE ONLY

There is an interesting philosophical question: how do you accept facts, innovation and wisdom?

FOR OFFICIAL USE ONLY

TABLE 1

Problems of Analysis

1. Indications and warning "thermometer"
2. Weapon systems' measures and portrayal
3. Uncertainty measures and portrayal
4. Military economics analysis
5. Trade-off measures and portrayal
6. Crisis situation analysis
7. Current intelligence (and cable) dissemination
8. Prediction - elections, deployments, etc.
9. Verification (SALT/MBFR) measures of confidence
10. Decision-making process
11. Projection of trends
12. Succession analysis
13. Transaction analysis
14. Multi-parameter data analysis

FOR OFFICIAL USE ONLY

STAT

Approved For Release 2004/10/28 : CIA-RDP80M01082A000200150011-6

Approved For Release 2004/10/28 : CIA-RDP80M01082A000200150011-6

FOR OFFICIAL USE ONLY

In this listing I have arranged the parameters in a subjective successively "more interesting" rank order. As each is of the nature of a binary (yes, no) choice, any given presentation format can be characterized by a five-digit string of 0's or 1's -- the CIA Seal is "00000" and the speculative combination of Telemetry Analysis Display System (TADS) and a color visual display unit (TV) is "11111." Table 3 is a very primitive attempt at filling in the spectrum of possible presentation means using some current IC products and other well-known information presentation formats.

The main utility of this structuring of presentation means might lie in the discipline it imposes on the study of the problem. There is a great deal of latent capability in the IC for generating new presentation means. The five-digit code can provide a way of understanding what we do now and -- on the basis of the latent capabilities -- what new presentation means are feasible. The appendix to this report contains some unusual means, mainly of the "00111" or less category. Speculation -- based on the five presentation means parameters, conditioned by what is possible with current IC capabilities and by what might be useful to users and analysts -- can give rise to feasible demonstrations.

There is another aspect of presentation which needs consideration. That consideration is with respect to the way in which means of presentation are used. For example, in typical hard copy (00111 or less) various styles are possible, e.g., prose, pre-formatted prose, precis, outline, "one-liner"; various formats are possible, e.g., conventional paragraphing, "bullets," italics, type font hierarchies, etc. I have not yet developed a structural approach to this problem -- perhaps only a survey of usage is possible.

This is a bit of what I was - 7 - approaching with my request of OCT for a style book on techniques of written presentation

FOR OFFICIAL USE ONLY

Approved For Release 2004/10/28 : CIA-RDP80M01082A000200150011-6

TABLE 3

Presentation Means Taxonomy

Non-inter./Interactive	Static/Dynamic	B&W/Color	Symbols/Charts	Fixed/Changeable	
0	0	0	0	0	CIA Seal; Encrypted message ticker
0	0	0	0	1	Letter; Watch Report; AEGIS; audio cassette, SIOP Emer. Action Mess
0	0	0	1	0	
0	0	0	1	1	NPIC briefing boards; LDX
0	0	1	0	0	Traffic sign
0	0	1	0	1	Traffic light
0	0	1	1	0	CIA employee badge (one's own)
0	0	1	1	1	CIB; NID; newspaper & magazines; Vu-graph/slides
0	1	0	0	0	
0	1	0	0	1	NYSE ticker; cable
0	1	0	1	0	Video cassette (B&W); Automatic watch
0	1	0	1	1	TV (B&W); ALIAS; radio
0	1	1	0	0	
0	1	1	0	1	Traffic light - computer controlled
0	1	1	1	0	Video cassette (color)
0	1	1	1	1	TV (color)
1	0	0	0	0	Slide rule
1	0	0	0	1	STARS
1	0	0	1	0	
1	0	0	1	1	NSA Sigint On-Line Info. Sys. (SOLIS); COINS; QUIKTRAK
1	0	1	0	0	
1	0	1	0	1	
1	0	1	1	0	
1	0	1	1	1	
1	1	0	0	0	
1	1	0	0	1	Telephone
1	1	0	1	0	
1	1	0	1	1	Timer; USN/OSIS; Tele Autograph; Picturephone
1	1	1	0	0	
1	1	1	0	1	
1	1	1	1	0	
1	1	1	1	1	ERTS; TADS; Weather map motions on color TV

Approved For Release 2004/10/28 : CIA-RDP80M01082A000200150011-6

FOR OFFICIAL USE ONLY

FOR OFFICIAL USE ONLY

Prognosis

What goes before implies a course of action that the following tries to make specific. That course of action is given by the following relationships:

Problems of Analysis +

Analytical Methodologies +

Technique and Technology =

Feasibility of Presentation Means

Given feasibility, then

Feasibility +

Management Interest →

Demonstration of Presentation Means

Given judgments as to the utility of demonstration results, then

Demonstration +

User Interest, Need or Demand →

Operational Capability

As "management interest" and "user (or analyst) interest" are conditioned in part by taste, my belief is that some presentation means which might at any time be found "uninteresting" would in actuality be only "untimely."

True, but how
accelerate? -



STAT

FOR OFFICIAL USE ONLY

FOR OFFICIAL USE ONLY

SOME UNUSUAL "00111" MEANS OF CONVEYING IDEAS

This Appendix is really just a primitive start at a more thorough survey of symbolic, textual and graphical means of conveying ideas. The means are unusual only in the sense that they are not commonly used in Intelligence Community publications. As the illustrations which are used have been borrowed from a large number of sources and are out of context, both of the original source and of possible intelligence context, they suffer somewhat. However, some brief comment is given opposite each as a way of showing some relevance.

FOR OFFICIAL USE ONLY

FOR OFFICIAL USE ONLY

Approved For Release 2004/10/28 : CIA-RDP80M01082A000200150011-6

The illustration opposite was produced by cooperation between DDI/OBGI/Cartographic and IC/MPRRG. It is a map of Africa in which dollars expended on intelligence in given countries is displayed in vertical extend above the country. The technique could be applied to any of a number of geographic variables of social, demographic, economic or political activity.

Approved For Release 2004/10/28 : CIA-RDP80M01082A000200150011-6

FOR OFFICIAL USE ONLY

STAT

Approved For Release 2004/10/28 : CIA-RDP80M01082A000200150011-6

Approved For Release 2004/10/28 : CIA-RDP80M01082A000200150011-6

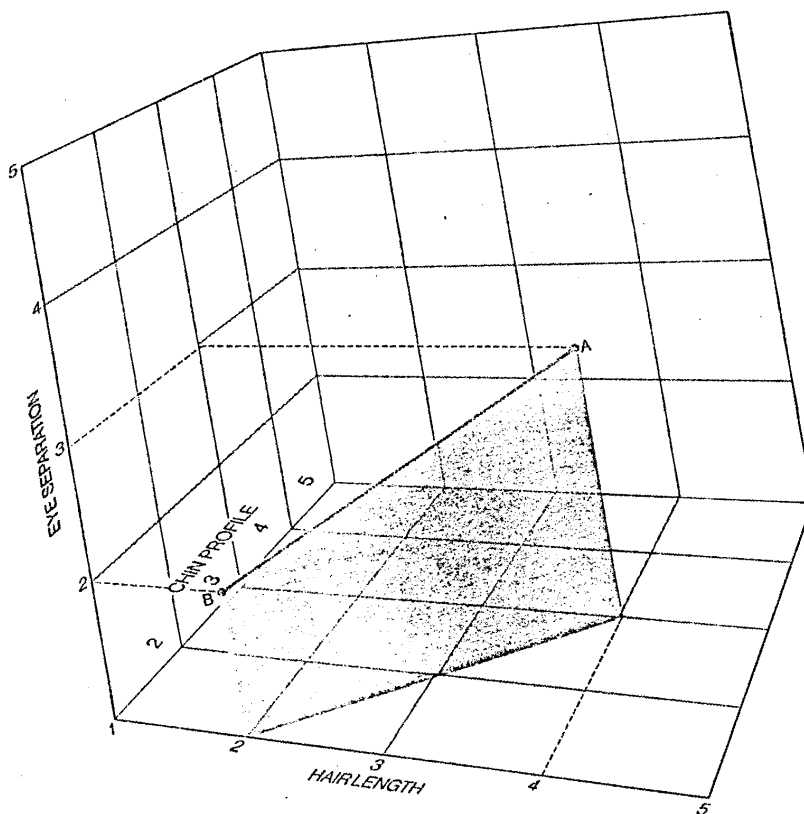
FOR OFFICIAL USE ONLY

Approved For Release 2004/10/28 : CIA-RDP80M01082A000200150011-6

The illustration opposite is typical of perspective in graphic plots. The logo beneath the illustration explains what is being described here; this presentation means might have utility in trying to show the movement of an entity in which three dimensions are significant. One example of this would be the absolute amount of dollar resources which a given country expends on defense and social programs both plotted as a function of time. One might use the same type of plot for descriptions of resources expended on PHOTINT, SIGINT and HUMINT as a function of time in which hash marks for fiscal years could be employed.

FOR OFFICIAL USE ONLY

Approved For Release 2004/10/28 : CIA-RDP80M01082A000200150011-6



THREE-DIMENSIONAL ANALOGUE of the 21-dimensional face-classification system makes each face a point inside or on the surface of a cube. For this simplified illustration three features are judged so that the assigned values become the coordinates of the point representing the face. Face A, for example, has a hair length of 4, eye separation of 3 and chin profile of 3. The distinction between any two faces can be measured simply as the Euclidean distance between the points. Thus the distinction between face A and face B in the drawing is $(2^2 + 2^2 + 1^2)^{1/2}$, or 3. In the 21-dimensional model each point is described by 21 coordinates and the equation for the distance between two points has 21 terms.

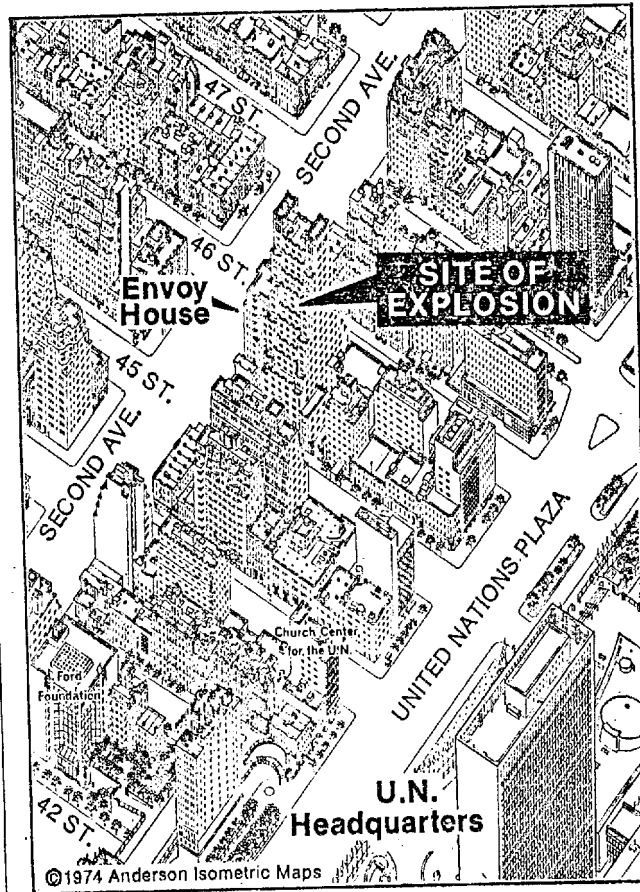
FOR OFFICIAL USE ONLY

Approved For Release 2004/10/28 : CIA-RDP80M01082A000200150011-6

This illustration opposite is the final example of the use of perspective which might aid in conveying a concept. One might imagine that in some type of operations such a view could be very useful during the preparatory stage.

FOR OFFICIAL USE ONLY

Approved For Release 2004/10/28 : CIA-RDP80M01082A000200150011-6



The New York Times/Anderson Isometric Maps/April 23, 1974
Many injured in the blast lived in Envoy House

FOR OFFICIAL USE ONLY

Approved For Release 2004/10/28 : CIA-RDP80M01082A000200150011-6

ready

The illustration opposite describes a way of producing a newspaper at a distance, and in principle is always in use in the intelligence community through LDX.

*(but not for finished
periodic reports
like this (eg
the NID to
customers outside
of Washington?))*

FOR OFFICIAL USE ONLY

Approved For Release 2004/10/28 : CIA-RDP80M01082A000200150011-6

March 22-2 1971
IEEE Special Issue

The Toshiba News

TOSHIBA
...In Touch with Tomorrow
TOKYO DENSHI KAISHA ELECTRIC CO., LTD.

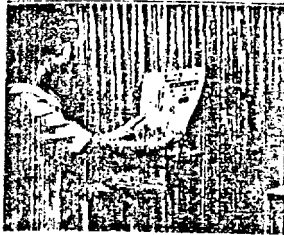


Photo shows telenewspaper being received on Model AT-2 receiver.

A New Method of Home News Evaluation

To many people, the word "telenewspaper" conjures up an image of newspapers and other printed materials coming out of a TV set. Model AT-2, however, uses no TV set; instead of television waves, it uses its own exclusive frequency of 469.1 MHz, thus avoiding the many restrictions at present surrounding TV facsimile system.

Despite their many similarities, telenewspapers and TV facsimile systems vary in several respects. The telenewspaper is a very similar to existing newspapers, it is in fact a newspaper transmitted by means of electronic waves. These waves may be TV waves or radio waves or frequency waves. A TV facsimile system, on the other hand, uses TV waves and transmits printed materials related to the news on the television screen. Many methods of superimposing the facsimile signals on the TV video or audio waves have been considered, and many people believe that TV facsimile systems will be operating at home during the 1970's.

The useful applications of such a system are practically unlimited. During election campaigns, for example, the transmission of a printed record of the required legal details and other details could save many a household from having to print and paste. It would also be convenient to have a printed weather map during the weather forecast, or printed words and music during a musical program. Announcing the company's home facsimile system, Mr. Yuzo Kato of Matsushita Electric Industrial Co., Ltd. said that such prospects were very bright for the system. In TV facsimile systems, it may even be possible to verify that the news is the amount of recording paper used. And this may not be far off when electronic achievement terms with existing papers printed from the TV set can be used.

Facsimile systems will also permit the printing of stock market reports and other news from programs, which is similar to existing newspapers. At news, time, details, and comments on this. These waves may be TV waves or radio waves or frequency waves. A TV facsimile system, on the other hand, uses TV waves and transmits printed materials related to the news on the television screen. Many methods of superimposing the facsimile signals on the TV video or audio waves have been considered, and many people believe that TV facsimile systems will be operating at home during the 1970's.

The prevailing view is, however, that TV facsimile systems will develop as a medium that does not conflict with the present use of newspapers. Mr. John Iwamoto, president of USA's Deebell Group and an authority on computers and communications, is reported as saying "TV facsimile is a combination of radio and hard copy. It's a brand new medium. But I don't think the day will come when the New York Times will pop out of a television set." And as a confirmation of the International Newspaper Publishers Association held in Kyoto, Mr. Iwamoto, general director of the United States Newspaper Publishers' Association, said "Home facsimile is very limited in terms of paper size and its rate cannot be more than that of an ordinary daily newspaper."

Nonetheless, many newspaper editors, they also evaluate the news as a source of information. According to its content, important news is assigned to the general news page, social page or overseas page, and a green larger headline and more space. Together with the use of photographs, these editorial decisions enable the reader to

TELENEWSPAPER AGE DAWNS

Toshiba Home Facsimile Unit Promises New Era of Instant Communication

Can Be Mass-produced for Every Home

Telenewspapers have also been called "radio news papers" based on a large number of newspapers printed in a short period and distributed by radio waves, a term derived from the companies by means of radio waves or cables directly to compact facsimile receivers installed at the home. These print the news, and the newspaper didn't need to read.

For several years Aichi Shikoku has been actively engaged in a short range and development program with Tokyo Denso Electric Co. aimed at developing a cable telenewspaper system. Model AT-2, an experimental type, employs a system of electronic recording by multi-stage electrodes, one of the several recording methods currently

being tested. Compared with the complex and expensive electronic system developed by RCA, the AT-2 system requires a slightly longer recording time but has the advantage of being light, compact, producing clear pictures and is suited to mass-production. If manufactured in quantity, a receiver would cost roughly the same as an ordinary black and white TV set.

The AT-2 has a scanning density of 8 lines per mm for extremely clear printing. Paper size is intermediate between standard newspaper and tabloid size. Speed transmission using a TV broadcast video signal was considered impracticable because of the attendant expense and automatic interference, picture, image and other phenomena, a total model of a

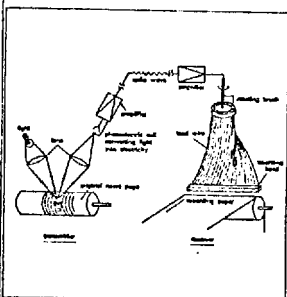
receiver using a distance of the TV audio frequency, 469.1 MHz, was tested. This was found to present certain technical and legal difficulties. The use of TV frequencies was abandoned and a system utilizing an exclusive radio frequency adopted. On completion of the trial model, an experimental type, was established with an operating frequency of 469.1 MHz and a frequency band of 100 KHz. Recording time is about 5 minutes per page. The transmission of telenewspapers depends not only on the cost of the receiver but also on the cost of the recording paper. Model AT-2 uses relatively expensive general-purpose recording paper developed by Ito Paper Mfg. Co., Ltd.

determine the relative importance of the news item at a glance. Newspaper companies trade on the television judgment and society relies on it. The reader would be fully satisfied with a more series of news fragments.

For a newspaper adequately to fulfill its proper role, it requires a relatively large page size so that the reader can glance over a large number of news articles and decide which are the most important. Telenewspapers, too, must meet this condition; page size must be at least as large as tabloid size, preferably larger. Even TV facsimile, too, will not always be limited to simple news items and headlines. News judging from the fact that competitors among television companies, the day may come when tabloid-size TV facsimile news items are transmitted to subscribers as a service. These newspapers and other materials could be transmitted at the end of broadcast, ready for subscribers to read next morning.

Like photographic transmission, facsimile works by scanning the original news page wrapped around a cylinder and converting the degree of light and shade into electrical signals. At the receiver end, the reverse procedure takes place and the original page is reproduced from the received signals. Of the various recording methods, Model AT-2 employs multi-stage electrodes, as shown in the diagram, a large number of lead wires are attached around the rotating drum, there ends forming a comb-like recording head of right wires per mm. Signals transmitted to the rotating

The Toshiba System: Compact, Inexpensive



FROM TRANSMITTER TO RECEIVER
The AT-2 system shown here is one of the few capable of mass production at a price within the reach of everyone.

brush are distributed to the lead wires as the brush revolves and show in the recording head. Parts of the electronic recording paper that receive negative charges of static electricity. The developer, a mixture of electrically charged fine particles and organic carbon, is applied to the recording paper and the print fixed by heating.

mechanical methods, some transmission and receiver systems operate electrically by using optical fiber tubes and special electron tubes. These electronic recording systems have the advantage of increased speed, but, even with mass-production methods, the extremely high cost of the recording tubes renders them impracticable for household use at present.

Transmission Speed: Five Minutes Per Page

A telenewspaper page measures 32 cm wide by 46.5 cm long, slightly smaller than standard newspaper size. Across the top appear the reading Aichi Shikoku Home (Telenewspaper) and news articles fill the eleven horizontal columns below this. The transmission of telenewspapers depends not only on the cost of the receiver but also on the cost of the recording paper. Model AT-2 uses relatively expensive general-purpose recording paper developed by Ito Paper Mfg. Co., Ltd.

The white paper gives an average of brightness and makes for clear, readable print. In place of photomicrofilm paper, the AT-2 uses special electronic recording paper in which, as in Xerox printing, only those parts charged with static electricity are printed. This is less expensive than photomicrofilm paper, if mass-produced, it could be made available at a cost roughly equal to that of high quality art paper. Because of the large quantity of paper required for telenewspapers, the problem of producing high quality paper unnecessarily is extremely important. A considerable breakthrough has been made in this respect, thanks to the cooperation of Ito Paper Mfg. Co., Ltd.

Five selector buttons are provided on the receiver to print out, at the reader's option, general news, political news, social news, overseas news and sports news. Though the merits and demerits of this system require further study, it should also be possible in future for the reader to set the apparatus before retiring and wake up next morning to find the day's papers ready to be read.

Model AT-2 was developed as a compact, electric, inexpensive system suitable for mass-production. (AT-2 is the second model produced on a test basis by Aichi Shikoku and Tokyo Denso Electric Co., Ltd.)

BEST COPY
Available

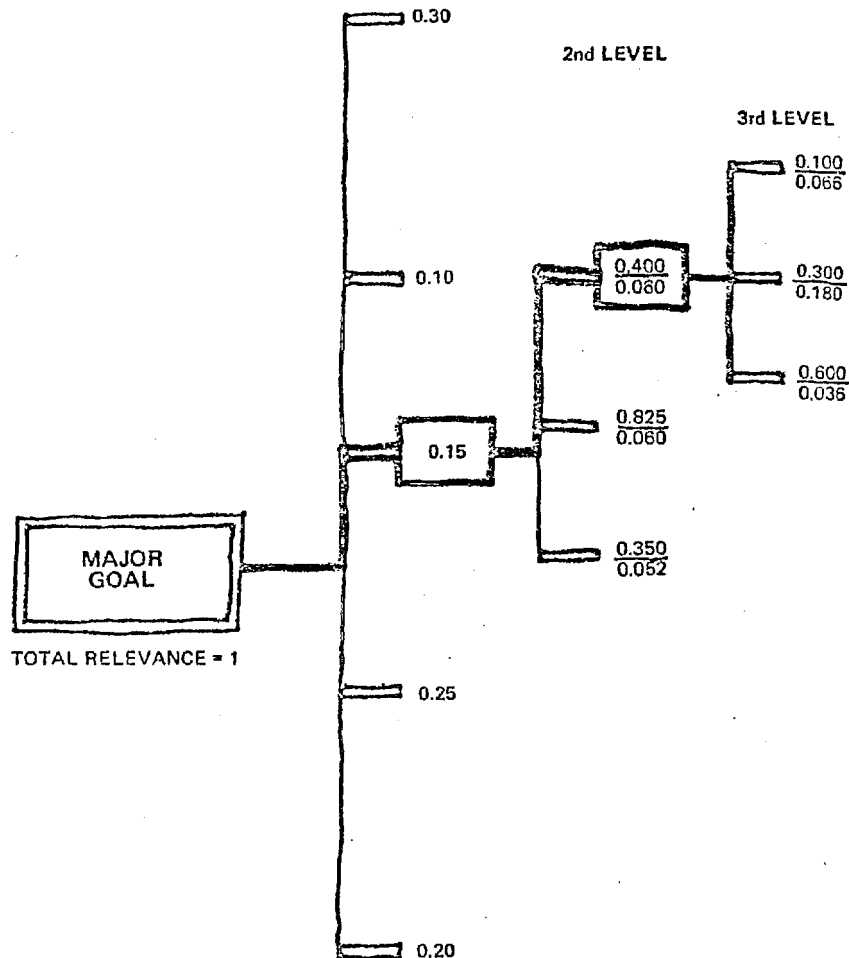
FOR OFFICIAL USE ONLY

The illustration opposite gives a schematic of some of the branch points in arriving at a decision. If, in regard to the DDI/OPR bayesian estimate of conflict possibility, each analyst were to make a decision tree, then after the fact the use of the decision tree could help them to illustrate their understanding of their colleagues' thinking and a subsequent time-series analysis might indicate significant events which changed thought processes.

FOR OFFICIAL USE ONLY

674

TOP LEVEL



The major benefits to be derived from using the Relevance Tree are summarized as follows:

In laying out the relevance tree structure, the designer arrays state programs and activities according to their contribution to the achievement of the executive's goals. A logical next step in the use of the Relevance Tree would be to relate it by means of a coding scheme, to the functional program structure of the state's budgeting system.

The Relevance Tree permits calculation of the relative amounts of support that should be directed to topical subelements that are several levels of activity removed from the ultimate goal. This is a powerful tool for use in the direction of efforts in planning, program development, and financial support of state activities.

Relevance Trees can be used to assess the goal directedness of an activity and thereby, to eliminate the constraint of traditional organizational categorizations of activities. Freedom from such constraints can be expected to induce important insights into greater program benefits and to keep the analytical structure from

FOR OFFICIAL USE ONLY

The illustration opposite was published in the first instance as an unordered and half-redundant matrix of correlation coefficients between entries. The significant half of the matrix was retained and organized according to a mathematical algorithm which caused elements in the spectrum of conflict behavior with mathematical characteristics most alike to be near one another. The result which is color-coded suggests that one might go a further step and with some smoothing techniques draw in contours not unlike a contour map.

*I need
clarification*

FOR OFFICIAL USE ONLY

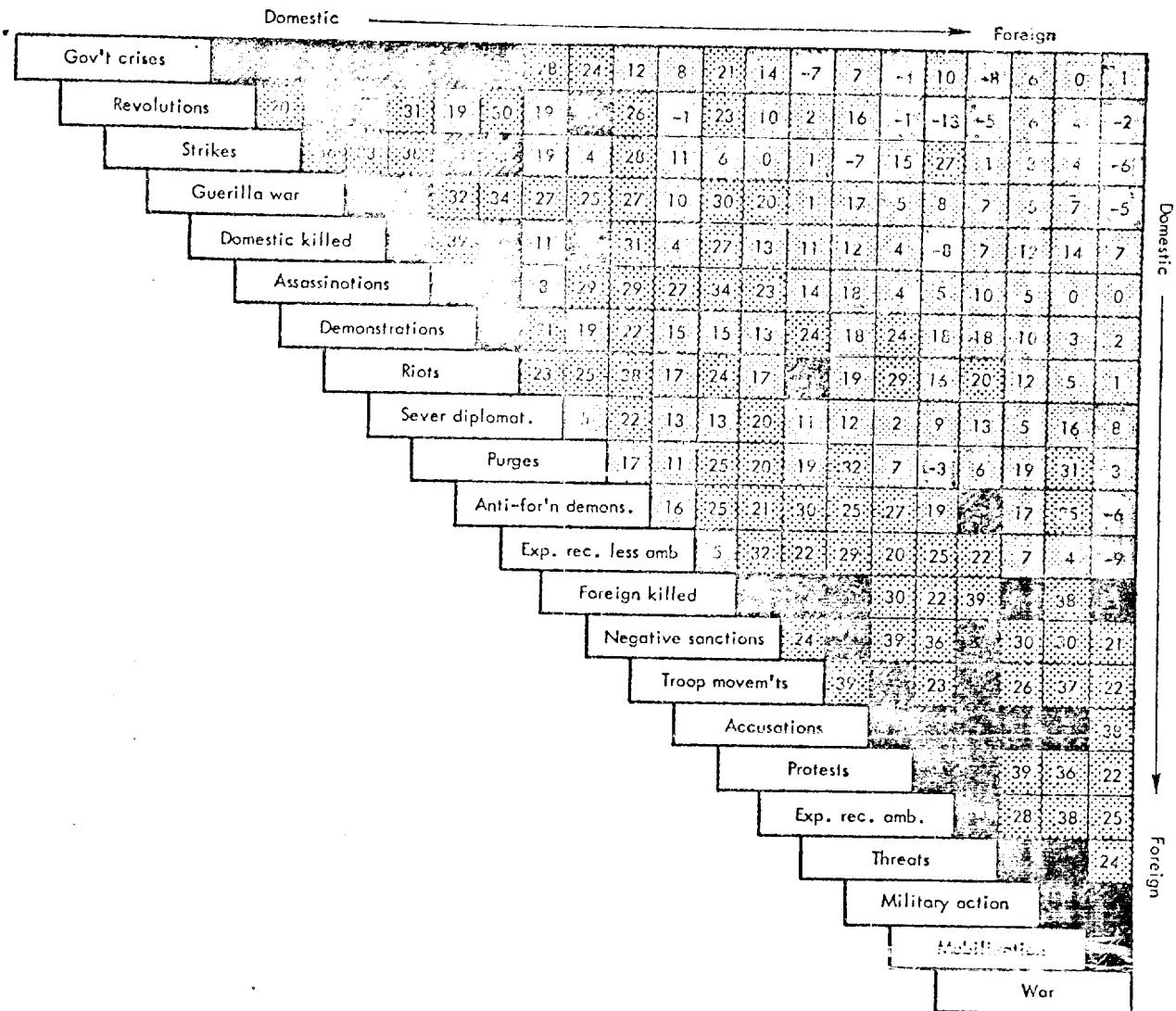
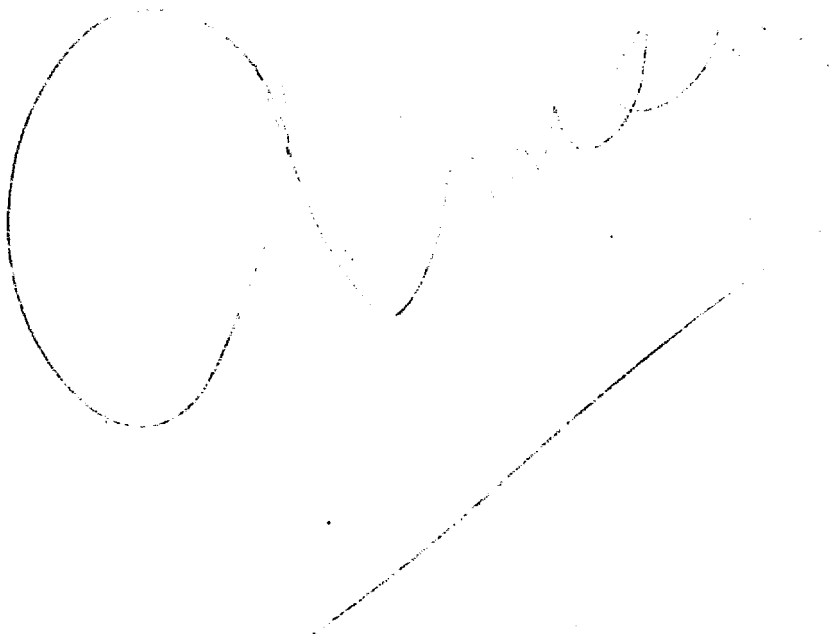


TABLE 5. SPECTRUM OF CONFLICT BEHAVIOR

80 60 40 20 0 -20

The illustration opposite makes two points:
(1) that there are a variety of unusual graph papers which might aid readers in an understanding of statistical data, and (2) that statistical data can be smoothed somewhat as an aid to an understanding of data. The model opposite summarizes a table which had about 80 entries.



STAT

Approved For Release 2004/10/28 : CIA-RDP80M01082A000200150011-6

Approved For Release 2004/10/28 : CIA-RDP80M01082A000200150011-6

FOR OFFICIAL USE ONLY

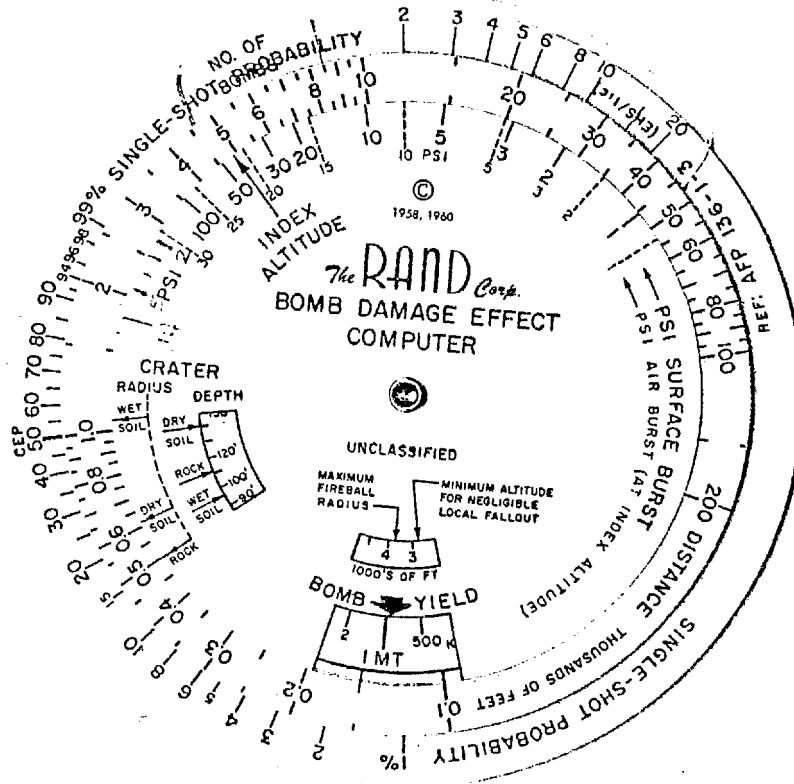
Approved For Release 2004/10/28 : CIA-RDP80M01082A000200150011-6

The illustration opposite is a copy of a slide rule which summarizes an important physical effect in strategic weapon systems analysis. It seems possible that in important instances one might include a slide rule in a pocket at the end of an intelligence report as a way of permitting the reader to more fully inform himself on a subject. The slide rule need not be used exclusively for technical data involving physical laws but could be used as well in instances where a curve fit to economic or social data is possible.

eg. for
SALT
optimal
c

Approved For Release 2004/10/28 : CIA-RDP80M01082A000200150011-6

FOR OFFICIAL USE ONLY



VIEW NEXT PAGE=A SKIP TO ABSTRACT #=B//# NEXT STEP=C
(C)NYTIMES. SEE ABSTRACT FOR YEAR. NONTIMES MATERIAL BY PERMISSION
2 OF 31 NYT/JNL 1973-12-19 : 65: 2 4/WGT 51/LIN
353-73-57 ANL/TOM 457910/IDN

L SILK SAYS EVERY AMER CORP WANTS TO KNOW HOW ENERGY CRISIS WILL AFFECT IT; SAYS ECON FORECASTING TEAM HEADED BY F P MURPHY IS MAKING STUDY FOR GE, USING INPUT-OUTPUT MODEL BASED ON WORK OF PROF W W LEONTIEF; STUDY'S PREDICTIONS OF IMPACT ON US ECON OF ARAB OIL EMBARGO ARE BASED ON CERTAIN ASSUMPTIONS: THAT ARAB STATE WILL YIELD TO INTENSE PRESSURE AND RESUME OIL SHIPMENTS TO US BY JUNE '74, THAT CURTAILMENT OF OIL SHIPMENTS TO JAPAN AND WESTERN EUR WILL NOT BE ESCALATED FURTHER AND MAY BE EASED, THAT US MONETARY POLICY WILL BE EASED AS THREAT OF RECESSION BECOMES MORE SEVERE THAN CONCERN ABOUT INFLATION AND THAT FED SPENDING WILL INCREASE ENOUGH TO OFFSET FISCAL IMPACT OF ANY TAX INCREASES THAT MAY ARISE FROM FUEL SHORTAGES; CONCLUDES THAT ENERGY CRISIS IS SERIOUS BUT MANAGEABLE; ESTIMATES SHORTFALL OF 2.1 MILLION BBLs DAILY FOR 1ST QR '74, ABOUT 11% LESS THAN NORMAL DEMAND OF 19.5 MILLION BBLs; FORECASTS MORE EXTREME SHORTAGES IN FUEL OILS (BOILER FUEL, DIESEL FUEL AND HEATING OIL), WHICH IT SAYS WILL FALL 21% SHORT OF DEMAND; ESTIMATES THAT MFG SECTOR OF ECON AS WHOLE WILL SUFFER DEFICIT OF 14% OF ITS NORMAL FUEL OIL REQUIREMENTS IN 1ST QR '74, WITH LARGER SHORTFALL IN NEW ENGLAND, 30%, AND MIDDLE ATLANTIC STATES, 20%; SAY LACK OF RAIL CARS, BARGES, SHIPS, STORAGE TANKS AND UNLOADING FACILITIES WILL LIMIT TRANSHIPMENTS OF ANY OIL SURPLUSES THAT MAY BECOME AVAILABLE; CANNOT SAY HOW MUCH FUEL NATION'S MFRS HAVE HOARDED AND CAN USE TO KEEP PLANTS OPERATING IF OIL SUPPLIES RUN LOWER THAN EXPECTED; PREDICT 4% ?

VIEW NEXT PAGE=A SKIP TO ABSTRACT #=B//# NEXT STEP=C
(C)NYTIMES. SEE ABSTRACT FOR YEAR. NONTIMES MATERIAL BY PERMISSION
DROP IN INDUS PRODUCTION FROM OCT '73 TO JUNE '74, WITH 17.1% DROP IN NEW ENGLAND; EXPECTS UNEMPLOYMENT TO INCREASE TO 6.4% BY 2D QR '74 AND RATE OF INFLATION TO AVG TO 6.4%, COMPARED WITH 5.1% FORECAST BEFORE ARAB EMBARGO; SAYS OUTPUT OF MAJOR APPLIANCES WILL DECLINE BY ALMOST 1.6% IN 2D QR '74 AND BY 8.8% FOR '74 AS A WHOLE; PREDICTS THAT CORP PROFITS WILL BE OFF SHARPLY, BUT NOT DISASTROUSLY; ESTIMATES 4TH QR GAIN IN GE PROFITS OVER '72 QR, BUT ANTICIPATES VIRTUALLY NO GAIN FOR 1ST QR OF '74 AND PROFIT DECLINES OF 11.1% FOR 2D QR, 14.8% FOR 3D QR AND 15.4% FOR 4TH; SEES DISTURBING INFLATIONARY PATTERN IN 1ST HALF OF '74, PREDICTING CONSUMER PRICES TO CLIME AT ANNUAL RATE OF 8.5% IN 1ST QR, 7.7% IN 2D QR AND BY 7% IN '74 AS WHOLE; SAYS SHORT-TERM INTEREST RATES SHOULD FALL STEADILY AS YR PREGRESSES, WITH COMMERCIAL-PAPER RATES ESTIMATED TO DECLINE FROM 9.5% IN CURRENT QR TO 7.4% IN 1ST QR '74, GRADUALLY DECLINING FURTHER TO 6% BY END OF YR; ON BASIS OF RELATIVELY HOPEFUL ASSUMPTIONS ABOUT MID-'74 END OF ARAB OIL EMBARGO, GE ECONOMISTS EXPECT IMPACT OF ENERGY CRISIS ON PRODUCTION TO BE STEEP, SHORT AND HIGHLY SELECTIVE, WITH HEAVIEST DAMAGE TO CONSUMER OUTLAYS AND I JS SPENDING, ESPECIALLY ON CARS, TRUCKS AND TRANSPORTATION RELATED SERVICES; SAY THAT IF EMBARGO IS EXTENDED THROUGHOUT '74, ECON WOULD GO INTO DEEP RECESSION, WITH GDP FALLING IN Q1, Q2 AND Q3, AND UNEMPLOYMENT RISING TO 10% BY Q4.

The illustration opposite is an AEGIS printout to a specific question (one involving Wassily Leontief). Such a format is a start forward possibly either in hardcopy as displayed or on suitable visual display units.

*This is a way to
improve analyst
scratch pad notes*